Following Their Voices:

Framing the context, analysis of early data, and recommendations for next steps

This report is focused on the educational improvement project called *Following their Voices* (FTV). According to provincial websites and documents such as the Education Sector Strategic Plan (ESSP), FTV is a large-scale initiative focused on improving the schooling experience for First Nations, Métis, and Inuit youth.* As stated on the FTV website,

> *FTV is … designed to raise the educational achievement and participation of Saskatchewan's First Nations, Métis, and Inuit student. FTV focused on enhancing relationships between students and teachers, creating structures and supports for teachers and school administrators to co-construct teaching and learning interactions with students and creating safe, well-managed learning environments.*

The report is presented in four sections. The first, entitled *What is the work?* is a short review of educational research literature related to large-scale education sector reform and a brief description of the Saskatchewan context and the FTV initiative – resulting in a research-informed goal statement for the education sector. The second section, called *Is FTV the right work?* uses a framework developed by prominent education meta-analyst John Hattie to examine the extent to which FTV, as designed, is likely to yield the goal identified in section one. The third section, called *How are we doing?* examines the FTV measurement plan and provides a glimpse of the evidence of effect to date. The fourth and final section, called *What should we do next?* offers recommendations for adjustments to present FTV processes and suggestions for adjustments to the initiative that may enhance ongoing understanding of effect and improve outcomes.

Why Hattie?
While this report focuses on a particular initiative – *Following Their Voices*, it has implications for policy writ large. Meta-analyses, when well-framed, are useful for policy development because they account for dozens studies and include only the best research. Hattie is among the most prominent and rigorous educational meta-analysts and his work covers a broad range of issues relevant for the Saskatchewan context.

What is the work?

Decades of provincial data – including credit attainment; final marks; school completion; attendance; and over-representation in alternative and remedial classes – show that Indigenous students have been poorly served by the system. Despite good intentions, multiple programs, curriculum renewals, provincial strategies, and other initiatives, outcomes for students in general and for Indigenous students in particular have remained perniciously stagnant.

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Jane David and Larry Cuban, in their 2010 book *Cutting Through the Hype*, identify more than two dozen systemic reform efforts, review the claims made about the results accrued from them, and analyse the

*Note: I use (i) First Nations, Métis, and Inuit and (ii) Indigenous interchangeably throughout this document.

science offered as evidence of effect. Based on the intersection of the interventions' underlying science and the resultant impacts of implementing them, they concluded that none of the common educational reform policies enacted in service of improved outcomes have resulted in significant or sustainable improvements.

Hattie echoed David and Cuban's work in his 2015 publication entitled *The Politics of Distraction*. Based on the powerful science he offers, he would say that we should not be surprised that most of the policies and initiatives enacted here and elsewhere have not led to substantive improvements. He observed that, while political leaders, ministry officials, and educators throughout the educational system are consistently and sincerely committed to developing high-quality learning environments that will yield improved outcomes for students,

> *They struggle to have the hard, somewhat uncomfortable discussions about the variability in the effectiveness of what happens at the classroom level and instead focus on policies that are politically attractive but which have been shown to have little effect on improving student learning … [policies and initiatives] such as more money, [alternative] forms of schooling, different types of buildings, performance pay for teachers, setting [more stringent] standards, privileging a few subjects [over others], [implementing] more assessments, [using] more technology, lower class size, [offering] greater school choice or [instituting] longer school days, to list just a few [do not and have never yielded the improvements they purport].* (Hattie, 2015a, p. 1)

[School divisions and Ministries of Education] struggle to have the … discussions about the variability in the effectiveness of what happens at the classroom level and instead focus on policies that are politically attractive but which have been shown to have little effect on improving student learning.

Hattie called such responses "distractors" (2015a) and pointed out that "many do have some kind of positive effects but those effects are … not profound [enough to justify the investments made in them]." (p. 33) In other words, typical responses to the "problem", though well-intentioned, tend to focus on organisational structures and processes rather than on the key issue – that is, efficacious student learning is more a function of the nexus between what teachers know and can do and the nature of the interactions they have with the learners in their classrooms than it is about the trappings of the policies and structures enacted in service of improved outcomes.

If we know what does not "work", how do we figure out what does work? According to Hattie, the first step in finding something that works is to acknowledge our objective for the educational process. In his words, "the aim of schooling is [or should be] for every student to gain at least a year's worth of learning for a year's input." (2015b, p. 1)

What does "one year's growth in one year's schooling" mean for Saskatchewan?

A year's worth of schooling in most Saskatchewan high schools is split up into two semesters – usually with five or six periods a day. In practical terms, depending upon the particular school an individual student attends, it would be possible to complete between 10 and 12 (or more credits if some courses are offered outside the traditional school hours such as lunch time or in the evening) in any given year. Considering this variability, however, it does not seem appropriate to set the "year's worth of growth" benchmark at the maximum a student could earn in one year because that number would merely be a function of the school a student happens to attend and it would be nearly impossible to aggregate it meaningfully to monitor progress at scale. However, since the Ministry of Education requires high school students to complete 24 or more credits between Grade 10 entry and graduation regardless of the school at which they attend, it seems more reasonable to set our "one-year's growth" target at achieving an average of eight or more credits per year over the typical three-year period between Grade 10 and 12 (adding up to 24 credits overall) as our objective for one year's schooling.

In Saskatchewan's high schools, ***one year's growth in one year's schooling*** *is (or should be)* ***SUCCESSFUL COMPLETION OF A MINIMUM OF EIGHT CREDITS****.*

Like baking bread, the objective – a loaf of bread – is a product of several steps; all of which must be successful to ensure a high-quality outcome. One needs appropriate measures of ingredients; several bouts of kneading, rising, and proofing; a baking pan sufficient to accommodate the size of the loaf; proper oven temperature; and a certain amount of time in the oven to ensure the bread is properly baked. At each stage, the baker gets concrete feedback about his or her influence into the process – for example, if the water was too warm, the yeast will not bloom; if there was too much sugar in the mixture, the dough will rise too much; too much fluid will make the loaf sticky; etc. At the same time, there are factors in the baking process over which the baker has no control but that affect the outcome just the same. For example, the elevation, barometric pressure, and relative humidity all influence the final product – while the baker cannot control these factors, he or she must account for them in the various steps to ensure a high-quality outcome. In short, the baker must ensure that he or she has done whatever is necessary for that stage for the whole process to turn out well.

So, too, must we be able to monitor progress as well as outcomes. While the goal is one year's growth in one year's time – defined here as a minimum of eight credits per year – students must also experience sufficient growth during their pursuit of each credit counted toward the overall goal. Just as the baker cannot control all aspects of the bread making process, the school and by extension, the teacher, cannot control all factors that influence students' success. Nevertheless, it is absolutely essential that we create regular and concrete feedback loops to keep us connected to our progress in affecting the factors in the teaching-learning process over which we do have control and do our best to account for the factors we cannot control.

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If reform efforts such as the ones described above as "distractors" do not work, what does?

Provincial education statistics suggest that most of the initiatives to alter policy, curricula, instruction, and education sector structures over the last decade or two have been largely unsuccessful in improving outcomes for First Nations, Métis, and Inuit students. While there have been modest improvements, the disparities between First Nations, Métis, and Inuit students and those who are not of Indigenous ancestry persist. For example, if we apply the definition of one year's growth in one year's time offered above (i.e., completing at least 8 credits per year), we have evidence of only minor improvements over the eight-year period between 2009 and 2016 covered by Saskatchewan's Ministry of Education's 2016-17 annual report.

- In 2009 (the baseline year), about 25% of First Nations, Inuit, and Métis earned eight or more credits, whereas about 71% of non- First Nations, Inuit, and Métis students did so – a differential of 46%.
- Five years later, in 2014, about 30% of First Nations, Inuit, and Métis students completed eight or more credits (an increase of 5%) and the proportion of non-First Nations, Inuit, and Métis students remained at 71% - reducing the differential to 41%.
- In the years following 2014 for which data were available, results for First Nations, Inuit, and Métis students improved by one percent (to 31%) and remained constant for non-First Nations, Inuit, and Métis students leaving the differential at about 40%. (Government of Saskatchewan, 2017)

The evidence from many decades of research by Hattie and many others have found that just four system-level processes elevate student learning. These include:

i. improving teacher and school leader expertise in their respective roles,
ii. working together on common understandings about progress and high expectations for the impact of teaching and leadership,
iii. seeing school leaders' most important role as developing collective expertise among teachers, and
iv. convening robust discussions to decide the purpose and desired outcomes of instruction and using the purpose and outcome statements as the filter for everything that is done in service of achieving the curriculum-specific required learning levels for EVERY student.

Hattie argues that the only action likely to lead to one year's growth in one year's time is to focus on the "variability among teachers in the effect that they have on student learning." (2015b, p. 1) In his words,

> *The greatest influence on student progression in learning is having highly expert, inspired and passionate teachers and school leaders working together to maximise the effect of their teaching on all students in their care. There is a major role for school leaders: to harness the expertise in their schools and to lead successful transformation. There is also a role for the system:*

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> *to provide the support, time and resources for this to happen. Putting all three of these (teachers, leaders, system) together gets at the heart of collaborative expertise [and is the only way to achieve the improvements necessary for substantially more students to gain at least one year's worth of growth in one year's time]. (2015b, p. 2)*

The quotation from FTV's website cited at the beginning of this report bears repeating here:

> *FTV is … designed to raise the educational achievement and participation of Saskatchewan's First Nations, Métis, and Inuit student. FTV focused on enhancing relationships between students and teachers, creating structures and supports for teachers and school administrators to co-construct teaching and learning interactions with students and creating safe, well-managed learning environments.*

There is significant overlap between Hattie's description of "what works" and FTV's statement of purpose and objective. Both place significant focus on engaging teachers in inquiry into their own practice with the goal of maximising effect – ultimately to improve outcomes for students. Both point to the importance of providing support and resources to help teachers improve their practice. Finally, both underscore the role of collaborative inquiry and the importance of building leadership in ensuring that the conditions required to effect wholesale change are directly a part of the culture of the school.

Hattie's meta-analytic research yields a clear picture of the path to profound and lasting improvement. He argues that significant improvement at the macro- (province and/or school division) and micro- (school, classroom, individual student) levels hinges on building upon and enhancing the collective expertise amongst teachers and other school-based leaders. The path to doing so requires eight separate but interwoven tasks. Each of these tasks is outlined briefly below using Hattie's typology.

This is a report about *Following Their Voices* and we acknowledge that most aspects of education in Saskatchewan such as: (i) curricula; (ii) certain measurements, assessments, and surveys; and (iii) system reporting requirements are directed by legislation; regulations; and, to a degree, school board policies and practices. We also acknowledge that full implementation of the tasks is beyond the scope and mandate of the initiative.

However, FTV does not exist in a vacuum. There is an enormous body of organisational change research that points to the efficacy of designing and implementing reforms within a small subset of the broad organisation before scaling them up across the entire system. FTV is well-positioned to fulfill this role of developing and field testing strategies to capitalise on the collective expertise of teachers for the enhancement of instruction and, ultimately, improvement of outcomes for Indigenous students that might be scalable across the broader system. With this in mind, each section of the following discussion includes a description of the task at the macro- (i.e., system-) level along with an explanation of the extent to which FTV, as an initiative within the broader context of provincial education system,

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could address the task. Each section closes with a brief description of the extent to which FTV has addressed that task to date or could do so in the future.

TASK 1 - Shift the Narrative *to collaborative expertise and student progression*

Hattie argues that present educational reform discourse has focused too much on changing individual teachers' practice and not enough on capitalising on their expertise by identifying those who are proficient with practices that yield positive student outcomes, promulgating them across systems, and leveraging them with other teachers who may not be as efficacious with those practices. Instead, our present mode of professional supports for educators reinforce the solitary nature of most teachers' practice. They also imply that (i) teachers, themselves, are deficient and (ii) if we could only 'fix' teachers everything would turn out fine. Yet, based on the dozens of research findings reviewed by Hattie, he concludes, "There is no way that a system will make an overall difference to student achievement by working one teacher at a time." (2015b, p. 5)

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Instead, according to Hattie, we must change our model of professional growth and support toward (i) enlisting the active support of other adults in the schools as well as parents, policy makers, and students to capitalise on the collective expertise and untapped energy in the system to achieve better outcomes; and (ii) moving away from a focus on pre-determined levels of performance on specific individual assessments to a narrative founded on progress – specifically, making at least one year's growth in one year's schooling.

In a way, this perspective speaks to an alternative approach to understanding student learning – one that acknowledges that there is a plethora of desirable outcomes that may accrue from school and we have to incorporate measurements of a broad range of these outcomes for both adults in the system and students attending the system to know whether the improvements we desire are taking place.

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Through extensive research in schools that "beat the odds" to achieve at least one year's growth in one year's time, Bishop, Ladwig, and Berryman (2013) found that schools that cultivate the sense of family embodied in the Maori term Whanaungatanga were tremendously successful – especially with Indigenous students. They argue that, particularly for Indigenous students and other students of colour, the classroom should be seen as an extended family with "warm interpersonal interactions, group solidarity, shared responsibility for one another, cheerful cooperation for group ends, and corporate responsibility for group property (e.g., knowledge)" (p. 6)

Furthermore, according to Bishop and his colleagues, where the level of Whanaungatanga described above (which they refer to as Culturally Sustaining Pedagogy) is mid-range or higher, low levels of student

engagement disappeared. However, this does not let teachers off the hook for employing highly effective student-centred instructional practices. In fact, to be culturally sustaining, classroom climate (Whanaungatanga) and instructional practice work in concert with each other. It turns out that students whose teachers thought that developing the family atmosphere was enough felt patronised, belittled, and cut adrift. At the same time, teachers who employed common constructivist or student-centred pedagogies (such as the "distractions" described earlier in this document) in the absence of culturally sustaining and relational pedagogy did not engage Indigenous students effectively in their learning.

Classroom conversations of particular kinds have been shown to disrupt social and structural inequalities. Brown and her colleagues (2017) argue,

> *Who the students are, their experiences, and the agency they take in reflecting on [classroom] conversations all need to be considered... [furthermore] how teachers and students use language [to interact] is critical to what is accomplished during and through classroom conversations*. (pp. 460 - 472)

Through this work, they developed three heuristic categories of interaction in the classroom – all of which enhance student engagement and focus when used well. These include: (i) curricular (the way teachers plan for conversations through the instructional choices they make); (ii) discursive (the specific uses of language during conversations); and, (iii) disruptive (deliberate moves away from the dominant ideologies that maintain status quo).

Description of FTV efforts to "Shift the narrative"

- All professional learning is collaborative:
    - Provincial facilitators model collaborative learning processes when they lead large regional and provincial professional learning sessions and when they work with school-based teams while they surface the critical dispositional and instructional stances required for FTV-related.
    - School-based implementation includes actions such as: (i) team huddles, (ii) collegial instructional planning, observations, and goal setting, and (iii) collective inquiry into the extent to which their own work aligns with what they've learned.
- A key component of FTV-related school-based practice is grounded in classroom observation, goal setting, and collaborative reflection to identify areas of strength and opportunities for growth.
- The nature of student-teacher interaction is a major focus of both the professional learning for teachers as well as instructional practice in the classroom – the focus for this learning is to shift the narrative to help students have a more prominent voice in the classroom.
- Teachers are taught how to incorporate discursive strategies into their classroom planning and provided with ongoing real-time feedback about their progress.
- Agentic discourse is a major focus for classroom interaction, peer observations, and professional growth targets.
- Teacher disposition toward teaching Indigenous students and their capabilities is also a major target for the initiative.

TASK 2 - Secure Agreement About What a Year's Progress Looks Like *across all subjects, schools, and system levels*

Recognising that learning does not progress in a linear fashion for most learners, Hattie argues that we must work collaboratively throughout the education sector to develop common and consistent understanding at all grades and in all subjects regarding what a year's growth looks like. This would require broad-based standards-setting processes to:

- "unpack" curricula to ensure consistent understanding of (i) curriculum outcomes and indicators, (ii) criteria of quality for each outcome, and (iii) progression of concepts embedded in curricula from one grade to another and as critical scaffolds to support student learning;
- create exemplars of student outputs (including multiple means of demonstrating learning) tied to curricular outcomes and placed on a continuum of quality;
- extensive collaborative sense-making sessions with teachers to ensure that they understand and apply the criteria in the same way; and
- devise, validate, and implement measurements sensitive enough to ensure teachers' deep understanding of curricula as well as to track student progress and teacher effectiveness.

This task cannot be short-changed or skipped. As Hattie points out, "the development of a common conception of progress is the key to accelerating progress. When teachers have different conceptions or expectations about what 'challenge' in the curriculum means … [there is] a profound negative impact on students." (2015b, p. 7).

The key to accelerating progress is to ensure that teachers understand curriculum expectations in the same way. When they have different conceptions or expectations about what 'challenge' in the curriculum means … [there is] a profound negative impact on students.

Some might fear that the process of developing and implementing consistent interpretations of curricula and application of common criteria of quality across the sector might impinge on teachers' professional judgement and creativity in instruction and assessment. However, New Zealand's national department of education recently engaged teachers across the country in discussions about this issue. The result of the work was that, while there is now a common understanding of curriculum expectations, teachers retain professional judgement in the day-to-day application of those expectations and the way in which they assess students' mastery of them. However, teachers are also held accountable by in-school and central-office leaders regarding the instructional and assessment judgements they make. They must be able to make a cogent argument for the veracity of the decisions made in service of student learning.

At the macro level, this work is beyond the scope of FTV. The initiative does not have the resources or the mandate to address this issue broadly. However, it is well-positioned to address it amongst the participating schools and teachers. At present, FTV-related large-group professional learning as well as school-based and personal professional growth goals are focused on creating culturally sustaining classroom environments. However, the ultimate goal is – or should be – that the intensive work on agentic and discursive classroom practice will lead to improved outcomes for Indigenous and, indeed, for non-Indigenous students as well. Given the importance of this task, it would be worthwhile to consider

engaging participating teachers and schools at the micro-level in professional dialogue about what it means to achieve curricular outcomes, assessment strategies to find out the extent to which students are learning what is expected of them, and instructional responses that both honour existing FTV objectives and, at the same time, link them to their effect on student learning directly.

FTV has not addressed this explicitly to date.

TASK 3 - Expect a Year's Worth of Progress *by raising expectations that all students [will] achieve*

Extensive research by dozens of academics has consistently found that teachers' expectations of individual students (and entire classrooms) act as a self-fulfilling prophecy of student achievement. "Students of high-expectation teachers [are generally] very successful in achieving their teachers' expectations and the students of teachers with low expectations [are] similarly successful at making lower gains." (Hattie, 2015b, p. 11).

Edmonds, widely considered as the father of school effectiveness and improvement research, argued in a 1979 landmark article called *Effective Schools for the Urban Poor* that we have a moral and ethical responsibility to hold the same expectations for minority and/or poor students as we do for other students. "Progress [in society and in education] requires public policy that begins by making the poor less poor and ends by making them not poor at all … Equitable public schooling begins by teaching poor children what their parents want them to know and ends by teaching poor children at least as well as it teaches middle-class students." (p. 15) Further, he pointed out that,

> *I require that an effective school brings the children of the poor to those minimal masteries of basic school skills that now describe minimally successful pupil performance for the children of the middle class.* (Edmonds, 1979)

> *The staff members of improving [or effective] schools hold decidedly higher and apparently increasing levels of expectations with regard to the educational accomplishments of their students … [additionally] the staffs of the improving [effective] schools tend to believe that* <u>all</u> *of their students can master the basic objectives, and furthermore, the teachers perceive that the principal shares this belief." (1979, p. 18, emphasis in the original)*

In what Saphier (2017) called the *surround sound environment of success*, all students benefit from a conscious shift in how educators, students, and caregivers think and talk about expectations and act in service of those expectations. Teachers' verbal behaviour in

> *Teachers' verbal behaviour … conveys three messages:*
> - *Whether what we're doing is important,*
> - *Whether I think students can do it; and*
> - *Whether I'm going to be persistent in making sure students "get it."*

handling everyday classroom events conveys three messages: (i) whether what we're doing is important; (ii) whether I [teacher] think students can do it; and, ultimately, (iii) whether I'm going to be persistent in making sure students "get it". Saphier's research found that for some students of colour and/or of poverty,

> *The surround sound environment [appears to] be more than beneficial; [sometimes] it [was] lifesaving and [was always] wonderfully empowering … teachers must convey their belief to students through how they handle [everyday interactions] and they must do so mindfully with language that has embedded meaning of their belief in their students. (p. 54)*

As has been documented in Saskatchewan's Ministry of Education's 2016-17 Annual Report, Indigenous students have been poorly served by the education sector. For example, 42% of Saskatchewan's 2014 Grade 10 cohort of Indigenous students graduated within three years of Grade 10 entry (in 2016). Furthermore, while there have been modest improvement in graduation rates and credit completion in recent years, present and historical assessment, curriculum, and instruction systems in the province have yielded high school completion rates like these for decades. For example:

- 32% of the provincial First Nations, Métis, and Inuit student baseline cohort (started Gr 10 in 2008-09 and was eligible for on-time graduation in 2010-11), graduated "on time" (within three years of starting Grade 10); whereas, 42% of the 2012-13 grade 10 cohort (eligible for on-time graduation in 2015-16) graduated on time and 43% of the next year's cohort did so in 2016-17. While any improvement is worthy of celebration, it is important to examine the statistics more closely to understand the results – especially when the population is relatively small as it is in this case. This is what we find:
    - In 2008-09 (the baseline year), there were 2,520 Grade 10 Indigenous students in the province, about 32% (806) of these students graduated on time in 2010-11.
    - Four years later, the 2012-13 Grade 10 Indigenous cohort of Indigenous students was just over 2,700 and 42% of them (1,140) graduated on time in 2014-15 – amounting to an increase of about 330 students as compared to the 2008-09 cohort's on-time graduation rate.
    - But, if we account for the growth in the size of the cohort between 2008-09 and 2012-13 (about 200 students) and hold the graduation rate steady for the 2012-13 cohort at 32% (the 2008-09 cohort level), there would have been 870 on-time graduates – in other words, even if there had been no change in graduation rate between 2010-11 and 2014-15, 64 more students would have graduated on time simply due to the larger initial cohort.
    - Therefore, 266 students more students from the 2012-13 Grade 10 cohort graduated on time as compared to the 2008-09 Grade 10 group (330 minus 64). As was stated earlier in this report, all successes are worthy of celebration. Yet, when we take into account the

806 (32%) of the 2008-09 provincial Grade 10 Indigenous student cohort graduated on time in 2011-12. 1,140 (42%) of the 2012-13 Indigenous student cohort graduated on time in 2014-15.

Controlling for the larger 2012-13 cohort, 266 more students graduated on time (about 8% improvement) in 2014-15 than did in 2010-11.

number of school divisions in the province or, for that matter, the number of high school programs offered across the province, there was little or no improvement over this period in terms of the actual number of students who graduated in most schools.

A big question we face, as we consider these and other results, is why we tend to employ responses Hattie identifies in his review of distractors. Edmonds (1979) argues that the problem lies, at least partly, in the low expectations we have of minority and poor children. Similarly, Saphier points out that we tend to make excuses for our lack of success in improving the outcomes for Indigenous students by pointing to the challenges they face in their personal lives as limiting their ability to be successful in school rather than by capitalising on the strengths they and their families bring to the learning as the foundation for further learning. Hattie's work is clear that this tendency becomes a self-fulfilling prophecy – students do not improve because we (and they) do not believe they can.

Macro-level development and implementation of this task is beyond the scope and mandate of FTV. However, there are parts of this task that already exist within FTV that align well with this task. Specifically those associated with teachers' disposition regarding Indigenous students' ability to learn and the way in which classroom climate and student-teacher interpersonal interaction both displays teachers' beliefs that Indigenous students are not only capable of learning at high levels but also that teachers will do everything possible to make that happen.

There are elements of this task that, while not currently part of FTV work per se, could be effectively incorporated into the initiative. Of particular importance is to develop a clear link between the present focus on particular pedagogical models and what effect we expect them to have on student outcomes. It will be critically important for the FTV initiative to turn its attention, explicitly, to student achievement and link the professional learning taking place to the changes in student outcomes that are likely to emerge if FTV-style pedagogy is implemented well.

- FTV professional learning has largely focused on teacher practice rather than on student academic outcomes. The FTV leadership team and school-based teams monitor certain aspects of student achievement but, at present, this has not been explicitly linked to the operational focus or to pedagogical practice.
- However, teacher disposition – along with expectations in a general sense – has definitely been a focus. In the short term, this is likely wise. There is a significant body of research – some of it cited in this document – that suggests disposition (e.g., teachers' beliefs about students' and families' capabilities, students' beliefs about their own abilities, etc.) has a profound influence on both instructional practice and student achievement.
- The FTV initiative is uniquely placed, as a large-scale initiative in the province, to advocate for, adopt, and expect for each student a year's worth of growth in a year's worth of instruction (i.e., achieve a minimum of 8 credits per year) in participating schools.

Task 4 - Develop New Assessment and Evaluation Tools *to provide feedback to teachers*

There is not much point in setting expectations that students experience at least one year's growth in one year's time if we do not have a mechanism sensitive enough to help students, parents, teachers, school

divisions, and the education sector overall to assess the extent to which the objective is being met – in real time! Reams of research have shown that this work is critical to improve outcomes for students – especially those of colour and others whose needs have not been well-served by the system as it presently stands. (e.g., Johnson, 2002; Johnson & Avelar La Salle, 2010; Wayman, Conoly, Gasko, & Stringfield, 2008) Generally, the focus for assessment work such this is designed to identify more effectively those students who have not yet learned what is necessary and to guide teachers (and students themselves) in designing the next learning steps to ensure student success.

It is also important to note that, while this work can have policy/practice implications at the macro-(provincial) level, this work is nearly always done at the local (school, division, and/or special initiative) level – at least initially. FTV is very well-suited to undertake this work. The FTV leadership team has already developed an extensive array of assessment tools – but most of them presently focus on teacher action rather than on student learning. This is as it should be because teacher action influences, to a large extent, student learning. However, the teacher and school participant cohort has reached the point that collegial enquiry into the links between FTV-specific teacher action and student outcomes would be possible and meaningful at the subject level. As was highlighted earlier in this document, a large part of this work should be aimed at collaborative unpacking of curricular outcomes to build collective capacity to do so and to create an intentional focus on ensuring that teacher action yields improved student outcomes.

All assessment and evaluation tools must meet three benchmarks of quality. These include:

- designing them for a specific pre-determined purpose,
- focusing on specific conceptualisations of achievement/growth/quality; and
- constructing them from high quality (psychometrically and conceptually robust) components.

As mentioned in an earlier section of this report, just as bakers require information/feedback about each stage of the bread baking process, so too does the education enterprise. Stiggins, in his 2008 *Assessment Manifesto*, argues for "balanced assessment systems … designed to *serve diverse purposes* by meeting the information needs of all decision makers." (p. 3, emphasis in original). According to Stiggins, all assessment and evaluation tools must meet three benchmarks of quality. These include (i) designing them for a specific pre-determined purpose, (ii) focusing on specific conceptualisations of achievement/growth/quality; and (iii) constructing them from high quality (psychometrically and conceptually robust) components.

While Stiggins's balanced assessment approach would provide excellent information regarding student progress/growth for various levels of the organisation, it is not necessarily sufficient for the teaching-learning process. An effective education system should also include robust measures of instructional practice and the effect that practice has on student learning. A great many students will learn what is necessary regardless of the instructional practices and decisions made by their teachers – the big issue is the extent to which an individual teacher successfully facilitates learning and growth for those students for whom what is being taught is difficult for them to master and, at the same time, challenge those for whom the content is not so difficult to experience a year's growth as well.

Edmonds also underscored the importance of regular assessments of student learning as a critical source of information about instructional effectiveness. "In comparison to classrooms in lower-achieving schools, classrooms in higher-achieving schools [were able to provide] more evidence of student monitoring processes." (p. 17) In other words, schools that are highly effective in facilitating learning – especially with minority students and those living in poverty – collect a broad variety of qualitative and quantitative student learning data; engage with these data as a learning community; use the insights gained from data analysis to tailor instruction to student needs, and monitor the effectiveness of instruction in a continuous and responsive loop.

Schools that are highly effective in facilitating learning – especially with minority students and those living in poverty – collect a broad variety of student learning data; engage regularly with these data as a learning community; use the insights gained from data analysis to tailor instruction to student needs, and monitor the effectiveness of instruction in a continuous and responsive loop.

Most secondary-level metrics – such as earned credits, school completion, final grades, and others – are appropriate but are far too broad and infrequent to be informative for improvement purposes. At the classroom level, few school divisions have the resources required both to provide teachers with regular and frequent feedback about their teaching and to support teachers in developing consistent and common understandings of curriculum outcomes. Other assessments such as writing, mathematics, and early grade 3 reading comprehension, are largely left to divisions to decide how to implement and aggregate them and teachers have wide latitude for the sort of "professional judgement" described above. This phenomenon makes these assessments useful as general indicators only.

FTV has invested a great deal of energy developing observational tools, perceptions surveys, and collaborative support structures to provide teachers and, in some cases, in-school administrators with feedback designed for goal setting and improvement. These appear to be helpful to spark conversations about pedagogy but they do not necessarily address the teaching-learning relationship and are definitely not sufficient to understand student learning well enough to direct instruction in the moment.

There is no need, at this point, to institute wide-scale examinations. Presently, since most secondary curricula are organised according to outcomes, student progress with respect to achieving curricular outcomes in each class are sufficient to ascertain the extent to which students are on track to achieve one year's growth in one year's time. However, at the individual student level, classroom teachers would need to collect and monitor a wide variety of assessment data (both formative and summative) to ensure that they respond to student needs as the learning takes place.

Task 5 - Know Thy Impact! *by taking responsibility for the impact of everyone in the school on the progress of students*

This task requires leaders to cultivate an evaluation/measurement culture in the school and build collective responsibility among everyone – students, staff, and parents alike – to ensure that students achieve at least the minimum target of one year's growth for one year's schooling. The key here, though, is for teachers to have an honest and unvarnished picture of the effect they have on their students'

learning. For most, that requires deep reflection on instructional practice – ideally as teaching and learning are taking place or, at least, shortly thereafter.

Research is clear that, particularly for Indigenous students, the nature of the learning environment and the interpersonal interactions that take place within it impact student learning and engagement in a profound way. Brade, Duncan, and Sokal (2003) found that there was a significant relationship between Indigenous student's high school and elementary achievement and whether they liked what they were taught about themselves (and how they were taught it); this factor also had a substantial impact on Indigenous students' later educational success. "If the individual liked what he or she was taught [about Aboriginals] in elementary and high school, his or her odds of obtaining some degree of postsecondary education were 31% higher." (p. 245).

For Indigenous students in particular, the nature of the interpersonal interactions in the classroom impact student learning and engagement in a profound way.

The way in which the adults behave in any school has a significant effect on the extent to which students are successful. Edmonds (1979) found several characteristics of adult professional interaction common to schools that are successful in supporting the learning of urban poor and minority students. These included:

- An administrative team that provided regular observation of instruction and feedback to teachers about their classroom practice;
- A school-wide plan shared by all staff to improve students' reading abilities; and
- Adults that believed they had the ability to have an impact on student learning and took collective responsibility to ensure that instruction met students' needs.

Another aspect of knowing one's impact lies in developing an objective picture of the extent to which instructional practice supports or hinders students' learning. One challenge when working with Indigenous students, particularly for teachers who are not of First Nations, Métis, or Inuit ancestry, is to create a culturally affirming environment focused on the strengths and talents students bring to the classroom rather than on the challenges they may have had in their prior learning. Oskineegish (2015) suggests that

> *Non-Native teachers [should] engage in continuous acts of professional development through self-reflection, communication, and community engagement … these acts of learning [are linked] to a teacher's ability to develop and implement lessons that are culturally relevant and meaningful and that meet their students' needs … a teacher's*

Classroom observation tools and student/teacher/parent surveys are present and helpful. For the most part, they are focused directly on the changes in teacher behaviour that are targeted by FTV professional development. But they are complex and many of the school-based personnel have difficulty interpreting them – thus limiting their usefulness.

As stated earlier, there are no assessments of student learning that would be helpful in "knowing thy impact" – particularly ones that could be aggregated to guide FTV planning and development.

> *ability to develop culturally relevant practices [is] deeply entwined with their willingness to examine their own pedagogical practices through acts of self-reflection. (p. 10)*

Task 6 - Ensure Teachers Have the Expertise in Diagnosis, Interventions and Evaluation *through teachers working together as evaluators of their impact on their students*

This practice has consistently been shown to have a powerful impact on teacher effectiveness and, therefore, on student growth. To yield at least one year's growth in a year's time requires

> *Less talk by teachers and more listening to student dialogue … more evaluation of surface and deep understanding and knowing when to move from one to the other … and teaching that builds on a deep understanding of what students already know.* (Hattie, 2015b, p. 18)

The extent to which students learn what is required is influenced directly by teacher instructional practice. Hattie (2015b) argues that teachers, therefore, need to be supported in their own learning to ensure that they become experts at (i) diagnosing student strengths and challenges both in asynchronous assignments and "in the moment" in the classroom; (ii) using a wide variety of instructional strategies "so that if one does not work with the student, the teacher changes to another" (p. 18); (iii) knowing which instructional strategy is most likely to help the student understand the concept being taught; (iv) evaluating the extent to which their instruction has yielded the student understanding required.

While the notion of the "reflective practitioner" has been in the education lexicon for decades and teachers have always been encouraged to be reflective about their work. However, the focus of that reflection has typically been aimed at instructional practice in isolation – rather than on the effect that practice had on student learning outcomes.

This task requires of teachers and other professionals in schools to become far more adept at reflectiveness on the effect their teaching has on students' learning. The key for this process, as pointed out by Bertrand and Marsh (2015), lies in helping teachers to make sense of the various pieces of data about student learning outcomes available to them as they work toward instruction that is more efficacious to student learning. They found that, while teachers sometimes attribute student outcomes to their own instructional practice, it is also common for them to attribute outcomes to "supposedly stable student characteristics" such as socio-economic status, special education designations, and ethnicity. When school systems help teachers build their data collection and interpretation skills, the nature of teachers' professional reflections tend to focus more on the effect their work has on student outcomes than they do on student characteristics.

When school systems help teachers build their data collection and interpretation skills, the nature of teachers' professional reflections tend to focus more on the effect their work has on student outcomes than they do on student characteristics.

Despite the importance of data from multiple sources in the pedagogical decision making, educators typically are not very good at collecting, interpreting, and using data to inform both student learning

outcomes and the extent to which their own practice affects those outcomes. Jimerson and Wayman (2015), found that in-service teachers require data-related professional learning in six areas including:

- Asking appropriate questions of data (to guide analysis and use);
- Accessing and operating district data systems;
- Data literacy/interpretation;
- Fitting data use with day-to-day practice;
- Sharing information via collaboration; and
- Knowledge codification. (p.1)

Jimerson and Wayman conducted their research in Texas. To date, there has not been extensive research in the Saskatchewan context but, given the plethora of research with similar findings conducted elsewhere, there is some basis to suggest that Saskatchewan teachers likely have similar professional learning needs in this area as well.

At present, there are FTV-specific structures that encourage teachers to work together to review certain types of data to improve instructional practice – especially through huddles and classroom observation-reflection. Specifically, FTV participants have co-construction meetings during which groups of teachers (3 to 5) are brought together to study student data (or evidence) to set collective instructional goals. Each teacher needs to share specific data from one or two Indigenous student(s) in his/her class and consider what is needed to increase achievement for this specific student(s). The group considers commonalities and sets a collective goal to increase achievement.

However, school teams do not appear to connect these behavioural data to their effect on student outcomes. Given that there is no explicit mechanism for this to take place, it is unclear the extent to which these structures yield improvements in student outcomes.

Task 7 - Stop Ignoring What We Know and Scale Up Success *by using the wealth of knowledge that exists in teacher communities*

One of the most tenacious challenges in educational practice is the general lack of agreement about (i) the precise objective of the work, (ii) what success looks like, (iii) knowing whether what we are doing is successful according to our pre-determined criteria of success, (iv) making course corrections if the work is not achieving our objectives, and (v) scaling up practices that are being successful. Edmonds (1979) argues that "there has never been a time … when we [as a community of educators] have not known all we needed to in order to teach all those whom we chose to teach." (p. 16) Yet, according to Hattie, we continually jump to the latest things – nearly all of which are merely politically expedient distractors rather than responses that are likely to yield substantial and sustainable improvements.

Hattie's research has found that this is caused, in part, because teachers' everyday work takes place in an isolation chamber (i.e., their classroom) that inhibits the outward flow of information about successful practices in the classroom as well as the inward flow of success achieved elsewhere.

> *We must stop [sentencing] teachers to work alone, behind closed doors and in isolation in the staffrooms and instead shift to a professional ethic that emphasises collaboration. We need communities within and across schools that work collaboratively to diagnose what teachers need to do, plan programmes and teaching interventions and evaluate the success of the interventions. We need communities that promote and share professional development aimed at improving teacher effectiveness and expertise, that devise performance 'dashboards' to show success in learning and achievement and that build a coalition of the successful.* (Hattie, 2015b, p. 23)

One of the major strengths of FTV, as an initiative, is that it started small and has steadily expanded as resources and expertise have evolved. The cornerstone of this initiative is collaborative examination of practice in several ways – the most important of which is the classroom observation and feedback cycle. Now that most of the data collection and display tools have been built and implemented, there might be capacity to link this work more explicitly to ongoing formative assessment of student outcomes and instruction that is responsive to student needs and, at the same time, is conducted in a culturally appropriate environment and process.

Building on the collaborative expertise of educators by actively engaging them in their own learning and reflecting about their practice is one of FTV's strengths as an initiative.

The various classroom observation and survey tools are important tools in this regard. Furthermore, the FTV facilitators and lead teachers provide the impetus for participating teachers to collaborate for the purpose of improvement.

FTV is presently in the "scaling up" stage by adding new schools and teachers to the program; while, at the same time, making improvements to the inner workings of the initiative. Furthermore, as schools join FTV, they rarely involve all teachers in the school initially. At these schools, as the initial cadre of teachers builds their capacity, schools scale up the FTV processes by adding additional teachers to the initiative.

Task 8 - Link [teacher] Autonomy To a Year's Progress *by studying teachers who are achieving a year of student progress and supporting teachers who aren't*

All of us have had direct experience with teachers who are highly effective in facilitating student learning and others who are not so effective. As students, we experienced some teachers with whom we "clicked" and the lights of engaged learning burned brightly and other teachers whose instruction did not hit the mark for us.

The importance of powerful teaching and learning cannot be overstated. There is a broad body of research that estimates the proportion of "effective" teachers as compared to those who are "ineffective". Not only do ineffective teachers have a detrimental impact on students' learning during any given year but also students who have more than one ineffective teacher are profoundly affected for their entire lives.

For example, "fifth-grade students experiencing highly ineffective teachers in grades three through five scored about 50 percentile points below their peers of comparable previous achievement who were fortunate enough to experience highly effective teachers for those same grades." (Rivers & Sanders, 2002, p. 16)

There is a veritable cornucopia of research about the extent to which the actions of teachers "add value" to students' learning. Based on the understanding that most students will learn a certain amount regardless of teacher practice, value-added analyses try to quantify the extent to which teachers' practice yields learning gains in excess of that amount.

We must challenge the myth that teachers are largely similar in their impact on student growth to promote a profession that can grow in expertise and to capture the high ground of teaching as a profession that demands expertise.

Hattie argues that the education system needs to figure out a way to challenge the widely-held belief that most teachers are more or less equal in their effect on student learning. "[We must] challenge the myth [that teachers are largely similar in their impact on student growth] … to promote a profession that can grow in expertise and to capture the high ground of teaching as a profession that demands expertise." (p. 22).

Further, according to Hattie, the education sector ought to foster an environment in which ALL teachers are expert or master teachers who are consistently successful in helping students achieve or exceed the goal of one year's growth in one year's time. He avers that the present practice of "teach how you wish based on your professional judgement" is problematic because the system then has no way of propagating highly effective practices and nipping in the bud those that are ineffective. Instead, he argues, the system needs to have a robust way to identify teachers who are highly effective and study their practices in order to teach others these instructional approaches. Further, for teachers who consistently foster less than one year's growth, we need to capitalise on the collective wisdom of highly effective teachers by having them support their less effective colleagues.

FTV is well-positioned to pursue this task. Presently, school-based facilitators regularly co-construct with teachers improvement foci, observe teaching to provide teachers with concrete real-time information about their teaching, and facilitate goal setting for improvement. At present, there is no "off-boarding" from observation-feedback-goal setting cycles. There maybe some opportunity to examine possibilities for this in the future. The vision could be that, as teachers master key aspects of FTV-specific instructional strategies, they could be observed less often ("off-boarded") and transition to formal and/or informal leadership/mentorship roles to capitalise on their expertise.

There appears, also, to be the infrastructure within the existing FTV framework to leverage individuals' successes across the larger group of participating teachers and schools. The regular initiative-wide professional learning sessions could include opportunities for participants to highlight their successes in a variety of ways. A particularly powerful means, for example, might be to record parts of an actual lesson

and have the teacher lead session participants in a "think-aloud" about his or her instructional decisions and the effect they had on students' learning in the moment.

FTV-focused classroom observation and perceptions surveys are useful in this regard. However, at present, while the infrastructure appears to exist, there does not seem to be a mechanism within the FTV structure to identify particularly effective practices and share them across network of FTV teachers and facilitators.

Is FTV the "right" work?

Decades of school improvement/effectiveness research have demonstrated that the extent to which the system ensures that all students achieve one year's growth in one year's time should be the baseline measure of system effectiveness. As discussed earlier in this report, outcomes for Saskatchewan's students overall and for First Nations, Métis, and Inuit students in particular, have improved over the last decade. However, these improvements have been modest and have not been sufficient to date to change the trajectory of improvement required to ensure that Indigenous students' outcomes are at least equal to those of other students; nor are they likely to be sufficient in the near future to accomplish this goal. (see Figures 1 and 2)

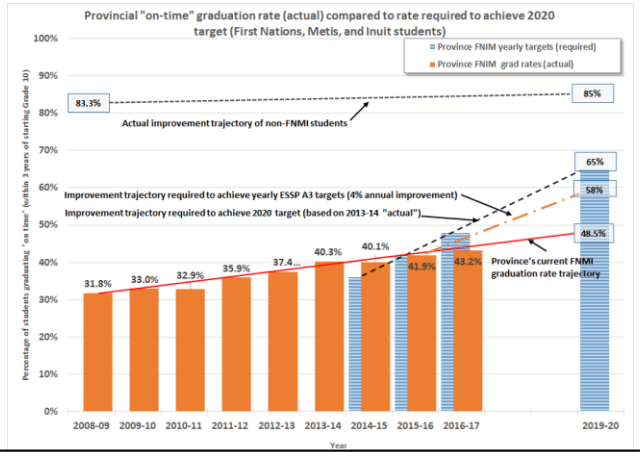


Figure 1 – Graduation rate trajectory regression analyses for Indigenous and non-Indigenous student populations

Figure 1 illustrates the results of regression analysis of actual graduation rates for Indigenous students for 2008-09 to 2016-17 inclusive to project an estimate of the Indigenous graduation rate for 2019-20. Superimposed on these data are regression lines for (i) the ESSP-stated objective of 4% improvement per year starting in 2015-16, (ii) the ESSP-stated goal of 65% Indigenous graduation rate by 2020, and (iii) graduation rate of non-Indigenous students.

We note the following:

- Present trajectory (based on 2008-09 baseline Indigenous graduation rate of 31.8%) results in a graduation rate of 48.5% by 2020.
- If a 4% improvement per year starting with the 2015-16 year was to be achieved we would see a graduation rate of about 58% (this is unlikely because there was only 1.3% improvement between 2015-16 and 2016-17).
- If we were to achieve the goal of 65% Indigenous graduation rate by 2020, the 2016-17 rate would have had to be about 50% - it was 43.2%.
- The non-Indigenous graduation rate went from 83.3% in 2008-09 to 85% in 2015-16 and remained steady for 2016-17, further improvements by 2020 are unlikely to be significant.
- If the regression lines for both Indigenous and non-Indigenous groups are extended into the future, they not intersect until about 2040. In other words, following present sector practice, graduation rates for Indigenous students will not achieve parity with non-Indigenous students for at least another 20 years.

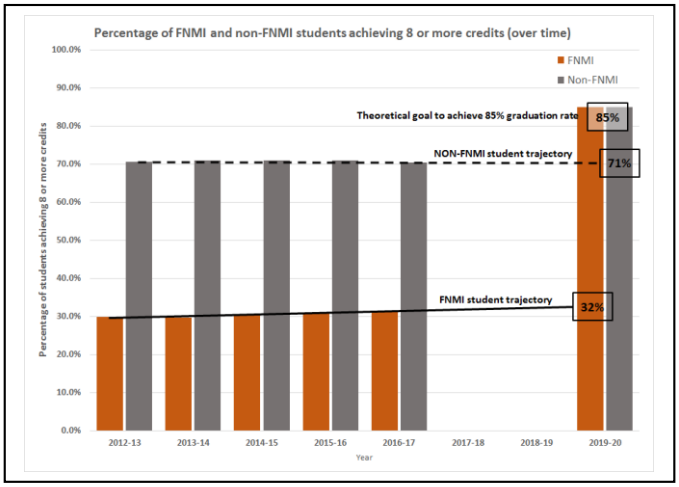


Figure 2 – Regression analysis of the percentage of students achieving 8 or more credits per year (i.e., one year's growth over one year's time)

Figure 2 illustrates the results of regression analysis of credit attainment data for both Indigenous and non-Indigenous students for 2012-13 to 2016-17 inclusive to project estimates of the percentage of students attaining 8 or more credits by 2020. (NOTE: This metric is proposed in this report as the main indicator of one year's growth over one year's time)

We note the following:

- Over the 5 years from 2012-13 and 2016-17, there was virtually no change in the percentage of students attaining 8 or more credits per year for either group of students.
- Present trajectory (based on 2012-13 data as a baseline) suggests that there will be virtually no change in the percentage of students attaining 8 or more credits for either group of students by 2020.
- In order to yield an overall graduation rate of 85%, the theoretical goal for this metric should be that at least 85% of students in both Indigenous and non-Indigenous groups will attain 8 or more credits per year so that they may graduate "on-time". Present trajectories suggest that there is no likelihood of attaining this goal in the future.
- Furthermore, there is no likelihood that the trajectory lines for both groups will intersect in the near future. In other words, following present practice, the differential between the percentage of Indigenous students attaining 8 or more credits and non-Indigenous FNMI students doing so will remain largely unchanged.

Hattie warns us that the preponderance of credible educational research shows that nearly all of the educational reforms typically enacted in service of improved outcomes are distractors that rarely yield significant improvements – especially "at scale". As shown in the figures above, while the system has produced improvements over time, those improvements have been relatively modest. This finding is not meant as a critique of present or past actions per se. Every decision taken by policy makers and practitioners alike is grounded in the best intentions for effecting improved outcomes for children and youth. Dr. Dylan Wiliam, in an address to Saskatoon teachers several years ago, observed:

> *Educators are working as hard as or harder than they ever have. They are doing the best things they know how to do and sincerely want to improve outcomes for kids. However, we must ask ourselves, Are the things we are doing now the best things that could be done in light of the ongoing research in the field? If so, excellent! If not, how do we help educators move from doing the best things they know how to do to do even better things?*

It could be argued that present practice has elements that are effective. Indeed, "almost any intervention can stake a claim to making a difference to student learning." (Hattie, 2012, p. 2) The key consideration for this section of the report is the *magnitude of difference we are making* to student learning. If we consider one year's growth in one year's time as the minimum benchmark of success, any practice we

employ – whether it is one we have always used or a new one – must be viewed through the lens of the extent to which it achieves at least this minimum benchmark with a substantial proportion of students. Yet, there are actions in education that may not enhance achievement directly but are worthwhile to do nonetheless. The argument made here is not that we must become Draconian about ensuring that absolutely everything we do needs to achieve this objective. Instead, we must simply become better at (i) evaluating the effects our actions have, (ii) explicating the rationale for choosing particular actions in light of both effect and expediency, and (iii) monitoring – continuously – the efficacy of the action based on our rationale for implementing it. In other words, is it having the effect we intended when we chose to implement it? In other words, regardless of whether the action is likely to impact student learning, is it still worthwhile to do once the investment of time and resources is considered?

For example, we expect all high school students to begin developing their own personal graduation plan during their Grade 9 year and to maintain it throughout their time in high school. Hattie's research suggests that this action is unlikely yield improved learning outcomes for students directly. However, such an activity can help students develop organisational skills and support them and families in course selection and, ultimately, future educational and career choices. At the classroom- and school-levels, this activity has implications for staffing, classroom learning time, and computer network capacity. So, to apply the lens identified above, one would ask whether the resources required to ensure all students have and maintain a graduation plan is justified in light of the impact it will have – considering that it is unlikely to change learning outcomes directly.

Finally, when deciding which the "right" actions are, we must also consider the extent to which present and/or proposed actions are similar to actions taken in the past and the extent to which those previous actions yielded the effects we expected and, at the same time, whether the actions have yielded the results we want to see from our implementation in a setting similar to ours. After all, if we did not see the outcomes we expected, continuing to do the same things we did in the past is unlikely to yield different results.

What is different about FTV?

As outlined earlier in this report, the findings from Hattie's meta-analyses present a potential way forward. That is, to invest heavily in building teacher collective expertise through 8 essential tasks that include:

- Shift the narrative,
- Agree what a year's progress looks like,
- Expect a minimum of a year's worth of progress in a year's time,
- Develop new assessment and evaluation tools,
- Know one's impact on students' learning,
- Develop teacher expertise in diagnosis, intervention, and evaluation,
- Scale up success, and

- Link autonomy to success in achieving, consistently, a minimum of one year's growth in one year's time.

The foundation of the FTV initiative is the quest to improve the quality of teachers' interactions with some of the most vulnerable students – those who are of First Nations, Métis, and Inuit ancestry. FTV is not only a radical departure from past practice but also, as outlined in earlier in this report, it addresses several of the 8 key tasks for improvement identified by Hattie.

Individual schools and teachers – as well as the initiative overall – are informed by a broad range of qualitative and quantitative data. Most of the FTV schools exist within the purview of the provincial education sector and are informed by metrics expected by the Education Sector Strategic Plan. (NOTE: A few FTV schools are under the direction of First Nations education authorities but there are some metrics required of them – such as credit attainment and final marks – as a condition of participating in the provincial Student Data System.) These measures include:

- OurSCHOOL
    - Student
    - Teacher
    - Parent/caregiver (optional)
- Attendance
- Achievement
    - Marks
    - Credit attainment
    - Graduation rates
    - Course-taking trends

FTV has also developed iPad and web-based tools to support ongoing data collection, feedback, and reporting. These include:

- Survey tool
    - Customised surveys – students, teachers, administrators, parents/caregivers
    - Perceptions about student-teacher relationships, the nature of their interactions, and the overall learning environment in school and classrooms
- Observation tool
    - Used by school-based facilitator(s) for data collection while observing school cohort teachers' instruction.
        - Indigenous student and teacher interactions during class
        - Record Indigenous students' comments on their learning
        - Visual representation of classroom instruction interactions for teachers' information and goal setting
        - Teachers may add their own reflections
- Goal setting tool
    - Supports teachers and school-based facilitators in using the observation data to set goals and devise action plans to improve instruction

- Walk-through tool
    - Data collection instrument to track progress toward their improvement goals
- Reflection tool
    - Aggregation of data for review of actions and reflection of the degree to which goals have been achieved

What sets FTV apart from most other improvement initiatives in the province is that it (i) builds on the collective expertise of participating educators to learn about discursive and other classroom interaction strategies, (ii) expects them to implement them in their classrooms – with observational support from colleagues, (iii) facilitates the setting of goals for improvement, and (iv) checks in with each teacher regularly to build on successes and address areas that require improvement.

Is there evidence of improvement in FTV schools?

One challenge faced by anyone attempting to evaluate the extent to which FTV is yielding improvements is that there is a lack of clarity around what it means to be successful. Improvement comes in many forms and success means different things to different people. When evaluating the extent to which an initiative as complex as FTV has resulted in improvements, we could go in countless directions for data to examine and foci to analyse. We could (and should) look at success through the lenses of the stakeholder groups to whom FTV is designed to respond – students, families/caregivers, communities (broadly defined), teachers/schools, education sector, and society at large.

Another challenge is that few of the FTV schools have all of their teachers involved in the initiative. This means that not all students in most of the FTV schools experience the instructional strategies and discursive pedagogies in all of their classes – and, in large schools it might be possible for a student not to experience FTV-style instruction at all. From a measurement perspective, the lack of a full FTV experience in most schools makes it difficult assay the extent to which there have been improvements "at scale" at the provincial, division, and, even school levels.

A further challenge is that the professional development activities and ongoing support in schools have focused mostly on understanding and perpetuating particular pedagogical moves and creating particular classroom environments … but, those moves have not been explicitly linked to the nature of improvements we might expect in student learning if these were to be entirely successful. The classroom instruction observation and walkthrough tools, for example, track 12 types of classroom environment characteristics and instructional behaviours – all of which are important in particular situations and well-supported in research as means to improved student learning. The measures include:

- Classroom context
    - First Nations, Métis, and Inuit content, perspectives cultures, and worldviews are incorporated;
    - Behavioural expectations understood;
    - High learning expectations understood;

    - Learning outcomes posted and communicated; and
    - Environment reflects students' learning and lives.
- Instructional behaviour
    - Co-constructs key aspects of environment and learning with students;
    - Feedback academic;
    - Feedforward academic;
    - Interactive teaching strategies;
    - Activates students' prior knowledge and experience;
    - Uses flexible groupings for instruction and learning; and
    - Broad variety of assessment tools are used.

Taken together, the classroom environment characteristics and the instructional behaviour moves form a multi-faceted picture of an environment in which Métis, First Nations, and Inuit students are likely thrive. However, at present, there is a lack of clarity regarding the mix of these interactions to yield the best possible student learning; consequently, it is difficult to say whether instruction is getting better because we are not quite sure what the overall target is.

Nevertheless, for the purposes of this initial report, data for two schools were reviewed (see Appendix A for complete data displays and detailed analyses). Both are medium-sized high schools that have about half of their teachers involved in FTV-specific professional development, instructional improvement, and ongoing personal reflection activities.

To analyse FTV-specific adult behaviour, both schools provided me with direct access to their data on the FTV website. I focused on the set of measures called *evidence observed by cycle*.

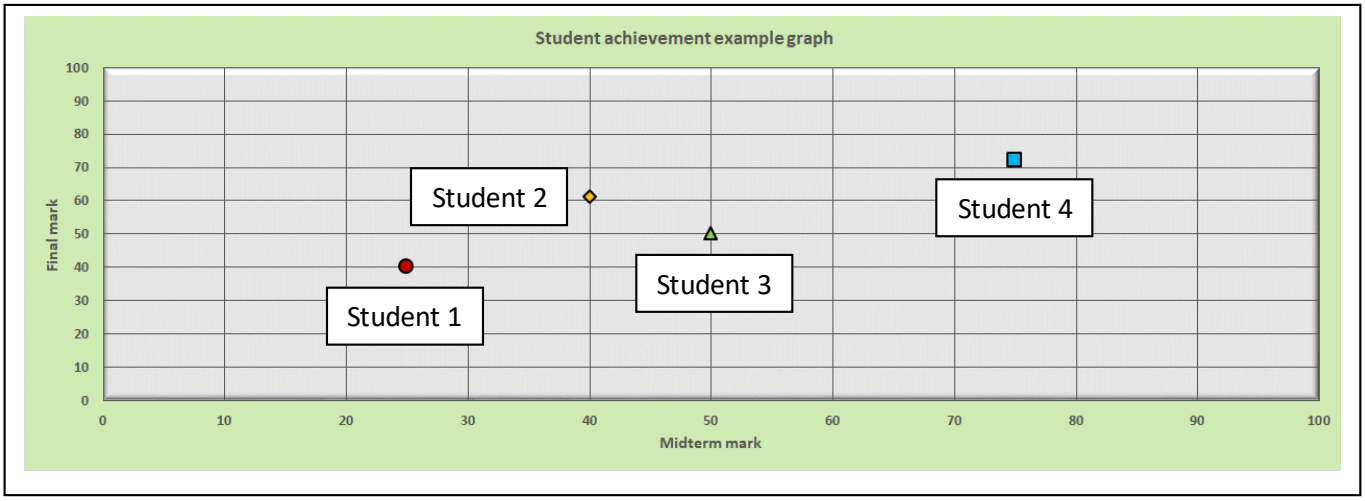
To analyse student outcomes,

- Grade 10-12 midterm and final mark data were collated for the following core subjects – English Language Arts, Mathematics (including both 20-level mathematics pathways), Social Sciences (including history, psychology, Indigenous studies, law, journalism, etc.), and Sciences (including natural, environmental, and physical sciences).
- Along with the achievement data, individual students' attendance data were tracked for each of these Grade 10-12 classes in both schools.
- Then, for each subject, individual students' midterm-final mark pairs were separated into three groups based on attendance. To account for variations in course enrolment dates, I calculated attendance using a simple ratio of the number of classes in that subject a student could have attended compared to the number of classes he or she actually attended (for example, the number of classes per term tends to be approximately 90 – if a student registered a week into the term, he or she was eligible to attend 85 classes; if he or she actually attended 80 of those classes, that student's attendance would be 80/85 or 94%). The three groups were:
    - High attendance is ≥ 80%
    - Medium attendance is <80% but >50%

- Low attendance is ≤50%

- Then, each midterm-final mark pair within each of the three attendance groups for each subject were plotted on graphs. See Figure ## example graph below – (Note: For the purposes of this example, all students had the same attendance record):
  - Student 1 (red circle) received a midterm mark of 25% and final mark of 40%.
  - Student 2 (orange diamond) received a midterm mark of 40% and a final mark of 61%.
  - Student 3 (green triangle) received a midterm mark of 50% and a final mark of 50%.
  - Student 4 (blue square) received a midterm mark of 75% and a final mark of 72%.

Figure ## - Student achievement example graph



- Note: Filters for inclusion in the analyses included:
  - Filter 1: To be included, a student had to have been assigned both a midterm and final numeric (i.e., percentage) mark in any given class.
  - Filter 2: The subset of students that remained in the cohort once filter 1 had been applied had to have had attendance statistics recorded for them (some students challenged online courses or participated in outcome/credit recovery programs for which attendance was not recorded).
  - Filter 3: Students who were in modified (i.e., courses ending in "8") and advanced classes were excluded but students who received alternate credits (i.e., courses ending in "1"). Further, there were no exclusions made for students' age.

Findings highlights:

Red River High

Teacher behaviour

Red River FTV teachers tended to be more consistent with the classroom context measures than they were with the instructional move measures. For example,

- Classroom context

- *Behavioural expectations understood* and *High learning expectations understood* were demonstrated over 40 times;
- Both *Learning outcomes posted and communicated* and *Environment reflects students' learning and lives* were demonstrated 30 or more times.

- Instructional behaviour moves
  - *Co-constructs key aspects of environment and learning with students* was the most frequently demonstrated instructional behaviour – 36 times;
  - Both *Feedforward academic* and *Activates students' prior knowledge and experience* were demonstrated about 25 times;
  - The remainder of the instructional behaviour moves were demonstrated rarely.

Student achievement – credit attainment

- *Social Sciences*
  - Nearly all Indigenous social science students were taught by an FTV teacher.
  - All but 4 high attenders earned their credit.
  - About two thirds of medium attenders earned their credit but many of the final marks were in the 50-55% range.
  - About one third of low attenders received the credit.
  - A few who had high midterm marks did not pass the course.

- *English Language Arts*
  - Nearly all Indigenous ELA students were taught by an FTV teacher.
  - All but 2 FTV-taught high attenders earned their credit – including those who were failing at midterm.
  - About ¾ of FTV-taught medium attenders earned their credit, ½ of those failing at midterm received the credit.
  - About half of low attenders received the credit.

- *Mathematics* and *Science* – In both mathematics and sciences at Red River High, too few teachers were involved in FTV to make analysis of Indigenous student credit attainment relevant.

B-Say-Tah High School

Teacher behaviour

Unlike Red River High, teachers at B-Say-Tah High School were consistent in applying both classroom context and instructional behaviours across the board. All but two of the 12 measures – *Learning outcomes posted and communicated* and *Broad variety of assessment tools used* were demonstrated 20 or more times; in fact, several (*high learning expectations*, *environment reflects students' lives*, *co-constructs with students*, *feedforward academic*, *interactive teaching strategies*, and *activate prior knowledge*) were demonstrated 30 or more times.

Student achievement – credit attainment

- *Social Sciences*
  - About ½ of Indigenous social science students were taught by an FTV teacher.
  - All but 4 high attenders taught by FTV teachers earned their credit – two-thirds of FTV high attenders who were failing at midterm received the credit.
  - All but one FTV-taught medium attender earned the credit.
  - About one quarter of FTV-taught low attenders received the credit.

- *English Language Arts*
  - Nearly all Indigenous ELA students were taught by FTV teachers.
  - All but three FTV-taught high attenders earned their credit – including several who were failing at midterm.
  - About two-thirds of FTV-taught medium attenders earned their credit – including many who were failing at midterm.
  - Several FTV-taught low attenders received their credit – including a few who were failing at midterm (however, nearly all lot attenders were FTV-taught).

- *Science*
  - Only a few Indigenous science students were taught by an FTV teacher.
  - Nearly all of the FTV students earned their credit.
  - Nearly all high attenders and about one third of medium attenders earned their credit.

- *Mathematics*
  - About ½ of Indigenous math students were taught by FTV teachers.
  - About one quarter of both FTV and non-FTV students were high attenders; all but 1 high attender attained their credit.
  - All but 4 non-FTV students and about ½ of medium attender FTV students earned their credit.
  - Nearly ½ of low attenders – whether FTV or not – earned their credit.

What should we do next?

Change research literature argues that, in order to effect substantial change, we must break away from practice that is either the same or similar to present and past practices. In the short-term, it is difficult to say for sure whether the FTV initiative is the "right" one. But, given that it is substantially different from typical practice in schools, there is promise that it may yield different results as well.

Both schools experienced positive signs in both teacher action and student outcomes. When there was a balance of students in both the FTV and non-FTV groups in a particular subject, FTV students, as a whole, tended to be more successful in attaining their credit than were their non-FTV counterparts. When a majority of students in a subject were taught by FTV teachers, far more students achieved their credits –

even if they had been failing at midterm. We also see some signs of more consistent attendance among FTV students.

There is also some evidence to suggest that the 12 classroom context and instructional moves characteristics may be linked to better outcomes for students – at least in the two schools studied for this initial report. In particular, FTV teachers at B-Say-Tah High School were consistently observed to be employing most of the 12 characteristics. We noted that, in subjects with a balance of FTV and non-FTV students, the FTV students (who would have had consistent experience of the 12 characteristics) tended to be more successful in gaining their credit than were their non-FTV counterparts. At this point, however, the link between the 12 characteristics and student outcomes is tenuous and requires a great deal more study over time but there is a glimmer of bright possibilities here nonetheless.

There are multiple challenges when trying to judge the extent to which FTV is having the success to which it aspires. The most problematic one is that there are no explicit objectives for the actual work being done – that is, attempting to change teacher practice in particular ways. While there are 12 characteristics being observed and measured, there is not a clear statement about the quantity of any one of the characteristics teachers should use nor a statement of what an appropriate mixture of these characteristics overall might be appropriate in any of the documents reviewed. Instead, one is left to assume that there should be more of all of them.

On one hand, there is likely some truth in the assumption. But, on the other hand, educational research is clear that learners (in this case, teachers) are far more likely to be successful when they have been provided with clear learning targets. Furthermore, as demonstrated at Red River High and predicted by Hattie, when teachers do not have clarity about expected changes, they may tend to focus on parts of the teaching-learning process that are most comfortable for them but have the least likelihood of being successful (Hattie calls them distractors). Teachers at that school were highly consistent at the classroom context pieces including (i) clarifying behavioural and learning expectations, (ii) posting learning targets, and (iii) crafting an environment that reflect students' lives. But, demonstrated the instructional change behaviours far less often.

In broad terms, though, FTV has a great deal of promise to yield improvements for First Nations, Métis, and Inuit students in Saskatchewan. When viewed through the lens of Hattie's influential meta-analyses, FTV is the only ESSP-endorsed initiative that is likely to be successful because it is focused on the things that have been shown to improve outcomes for students – that is, improved teacher knowledge and practice. Having said this, however, several recommendations come to mind for the FTV leaders to consider.

Recommendation 1 – Facilitate the development of a common understanding among FTV schools and teachers of what it means to experience one year's growth in one year's time and foster commitment to achieving this objective.

It will be important in the near future for the FTV leadership to facilitate the development of a common understanding among participating schools and teachers of what it means to experience one year's growth in one year's time. Hattie (2015b) supports this recommendation in the following statement:

> *We need to have a robust discussion about progression based on teachers' judgements of growth and whether this progress is sufficient … [which leads to] healthy debates about 'what it means to be good at ___' and the development of a common conception of progress among teachers. Indeed, this development of a common conception of progress is the key to accelerating progress. (p. 7)*

The chain starts at the classroom level with a broad range of qualitative and quantitative data carefully designed to provide students with opportunities to demonstrate their mastery of curriculum outcomes. Then, this initial evidence chain is used by the teacher to determine the extent to which the student demonstrated sufficient mastery of enough outcomes to justify earning the credit and to determine the student's final mark. During the years that he or she attends high school, the student gathers credits until he or she has successfully completed the required "core" credits plus a few others to be eligible for graduation.

There are countless points during this process at which the chain can become weak and, perhaps, even break. The purpose of FTV seems to be to minimise both the number of points as well as reduce the "damage" that weak and/or broken links might have on students' progress.

In this area, FTV also targets improvements in practice. Many of the classroom context measures are focused on creating classroom conditions for students to be successful. However, there are still too many instances in which students are deemed successful (or not) in gaining their credit based on the lottery of the particular teacher to which they are assigned.

Earlier in this report, we established a credible definition of one year's growth in one year's time – that is, achieving (i) individual credits during the first semester a student pursues them and (ii) accumulating at least 8 of these credits per year. While there would be need to be some flexibility in applying this definition due to individual circumstances, this objective ought to be held for all students. A critical goal for FTV is to ensure that teachers are consistently effective with all students in achieving this goal.

Recommendation 2 – Develop explicit focus amongst FTV schools and teachers on planning, teaching, and assessing based directly on curricular outcomes.

As is the case for the other strategic responses mentioned in this report, FTV is well-placed to build collective understanding and capacity for curriculum-based planning, teaching, and assessing among

participating schools and teachers. Presently, most Saskatchewan secondary curricula are organised according to outcomes and indicators and others are undergoing renewal that will result in both updated material and a focus on outcomes and indicators as well.

It is recommended that schools participating in FTV commit to using curricular outcomes as the basis for planning, instruction, and assessment. There are multiple potential benefits that could accrue from doing so. For example, a focus on outcomes would improve both teachers' and students' understanding of curricular learning expectations. Such a move would also help schools monitor students' progress more actively and precisely but also improve the ability to respond to students' unique needs as they arise.

Recommendation 3 – Focus measurement of FTV project effectiveness on a limited number of the most important strategic pieces of data.

A great many assessments of various kinds presently being used across the FTV initiative. As pointed out earlier, some of these are mandated through the auspices of the ESSP broadly and some have been developed exclusively for FTV use. In conversation with administrators at the two schools included in the data analysis portion of this project, it became clear that they were struggling under the weight of the many assessments required by both the ESSP/division and the FTV initiative.

Each piece of data is potentially useful but, if school teams find the totality of data collection and analysis expectations (for both ESSP/division and FTV initiatives) difficult to manage, perhaps there might be ways to use some data points required of schools by the ESSP or by their divisions for FTV purposes as well to reduce the volume of data overall. Related to this issue is one of data literacy. Some of the data presently collected provincially as well as within the FTV initiative are complex on their own and, when added to the matrix of other data collected, the picture appeared to be daunting for some.

We make no specific recommendation regarding which data may or may not be required. However, we do recommend that a thorough examination of the data collection, analysis, interpretation, and mobilisation process be conducted. This process should begin with defining precisely what information is required to answer the most important questions regarding the FTV initiative – namely, (i) to what extent are the FTV-related professional development activities yielding the required dispositional and pedagogical changes and (ii) to what extent are these changes improving the outcomes for Indigenous high school students? Once these are clear, it is recommended that data required by the Ministry and/or the ESSP be evaluated first as sources of information to answer these questions. Then, FTV-specific data be developed to fill in the gaps in knowledge. It may well turn out that all of the data presently collected are required. But, in any case, professional learning within the FTV initiative definitely needs to place more emphasis on assessment and data literacy to enhance school staffs' abilities to use the information effectively.

Recommendation 4 – Clarify the objectives of FTV and communicate them in a concise manner.

Clarity is required in terms of the overall objectives of FTV and the means to determine the extent to which success is being met over time. In total, data collection covers both teacher pedagogy and student outcomes. Furthermore, clarity is required in the extent to the nature of the connection between the 12 characteristics and the changes expected in student outcomes. There are underlying assumptions found in the documentation and in conversations with FTV and in-school leaders but, at present, the connection is not explicit.

This phenomenon is problematic because one cannot hit a target one does not see. Most of the FTV-specific professional learning is focused on two things (i) helping teachers to develop the personal and professional disposition required to address the unique learning needs of Métis, First Nations, and Inuit students and (ii) particular pedagogical practices that have been shown elsewhere to be effective in helping these Indigenous students achieve high levels of proficiency in their learning.

Most of the internal FTV measurements are designed to guide teachers in inquiry of their professional practice with the ultimate goal of becoming more effective as teachers of Indigenous students. This is as it should be because we are measuring what we are teaching.
However, the ultimate goal of any educational improvement initiative is (or should be) that students successfully complete credits at an appropriate rate and graduate on time, FTV needs to find a way to link the measures of practice to student achievement.

Recommendation 5 – Create an ongoing research initiative to support growth, help with course corrections, and understand the extent to which FTV initiatives are yielding the improvements that are sought.

Extensive research is required to support understanding of the ways in which the various pieces of FTV work together to improve both teacher practice and, ultimately, student outcomes. Ideally, this would take the form of intensive embedded research that retains an arms-length stance to the work. There is a plethora of possible research directions that could support understanding of FTV work, help scale up the successes, and resolve the problems.

In a perfect world, there would be an FTV research institute that could direct research foci and support financially some of this critical research (ideally, the research would be conducted by graduate students supervised by faculty who understand the initiative and its objectives).

Recommendation 6 – Create a process for identifying and highlighting highly successful practice.

We recommend that the FTV initiative create a means to identify and highlight highly successful practices across the initiative. The initiative would benefit from having a robust way to capitalise on the collective wisdom of highly effective FTV teachers by identifying those who are highly effective at employing the strategies embedded in the initiative and using them to significant effect in ensuring that students

experience at least one year's growth in one year's time. Note: at the individual teacher level, we would want to examine the extent to which they are successful in helping all students achieve the credit for which they are enrolled. We need to capitalise on the collective wisdom of highly effective teachers by having them support their less effective colleagues.

FTV is well-positioned to pursue this task. Presently, school-based facilitators regularly co-construct with teachers improvement foci, observe teaching to provide teachers with concrete real-time information about their teaching, and facilitate goal setting for improvement. At present, there is no "off-boarding" from observation-feedback-goal setting cycles. There maybe some opportunity to examine possibilities for this in the future. The vision could be that, as teachers master key aspects of FTV-specific instructional strategies, they could be observed less often ("off-boarded") and transition to formal and/or informal leadership/mentorship roles to capitalise on their expertise.

There appears, also, to be the infrastructure within the existing FTV framework to leverage individuals' successes across the larger group of participating teachers and schools. The regular initiative-wide professional learning sessions could include opportunities for participants to highlight their successes in a variety of ways. A particularly powerful means, for example, might be to record parts of an actual lesson and have the teacher lead session participants in a "think-aloud" about his or her instructional decisions and the effect they had on students' learning in the moment.

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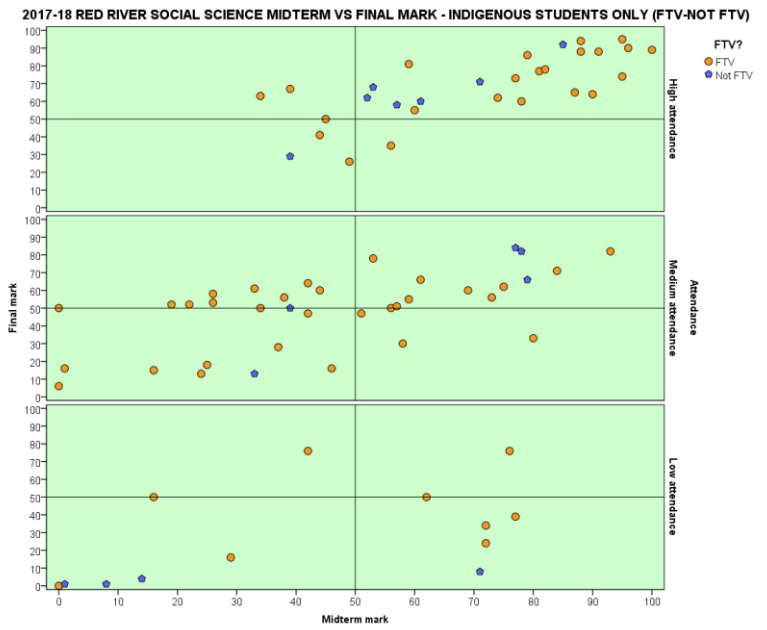
Appendix A – Scatter plots – Indigenous students' midterm vs final marks by subject, FTV, and attendance

Red River High

Social Sciences



Total # of students=140

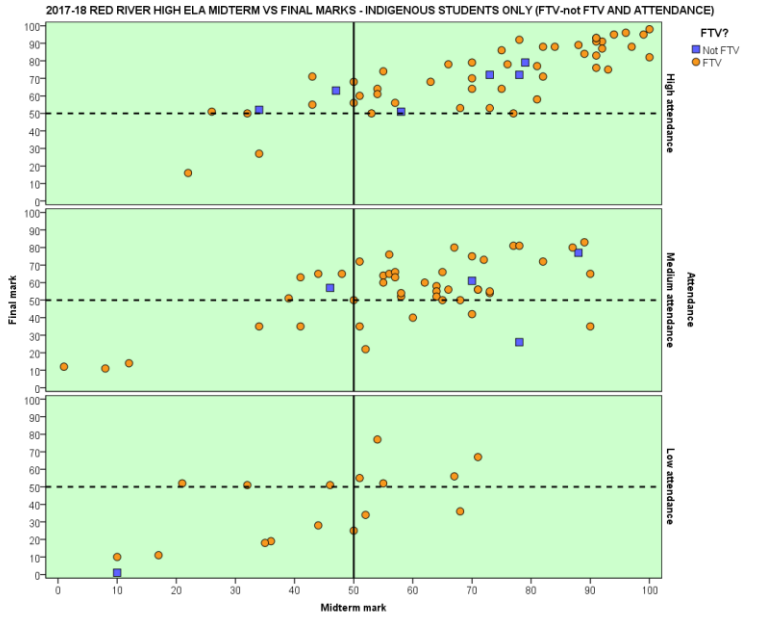
- FTV = 108
- Not FTV = 32

Results:

- Nearly all Indigenous social science students were taught by an FTV teacher.
- All but 4 high attenders earned their credit – ½ of those failing at midterm received the credit.
- About two thirds of medium attenders earned their credit, ½ of those failing at midterm received the credit.
- About one third of low attenders received the credit but a few who had high midterm marks did not pass the course.

Mathematics and Sciences courses included just a handful of FTV-taught students

English Language Arts



Total # of students=235

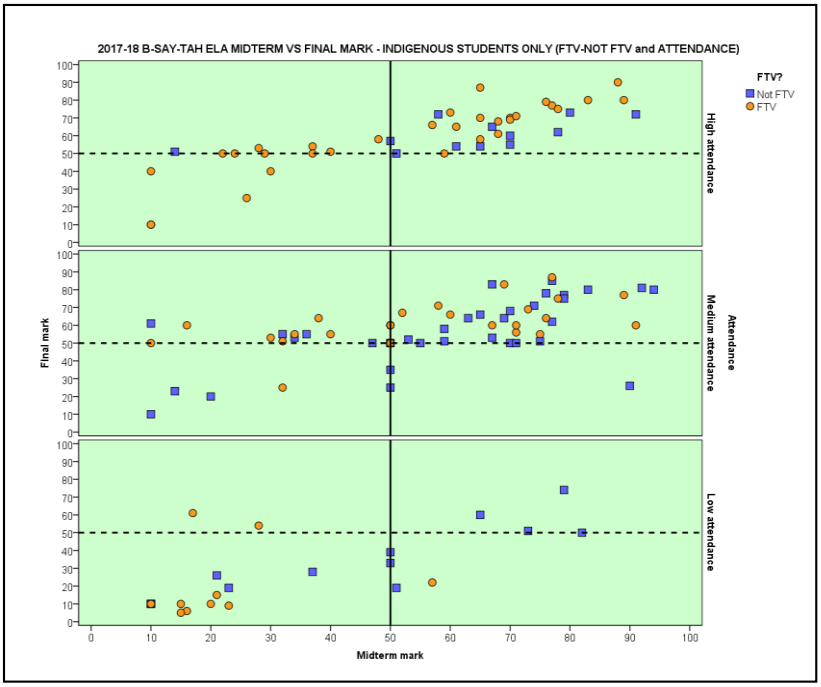
- FTV = 195
- Not FTV = 40

Results:

- Nearly all Indigenous ELA students were taught by an FTV teacher.
- All but 2 high attenders earned their credit – ¾ of those failing at midterm received the credit.
- About ¾ of medium attenders earned their credit, ½ of those failing at midterm received the credit.
- About half of low attenders received the credit.

B-SAY-TAH High School

Social Sciences



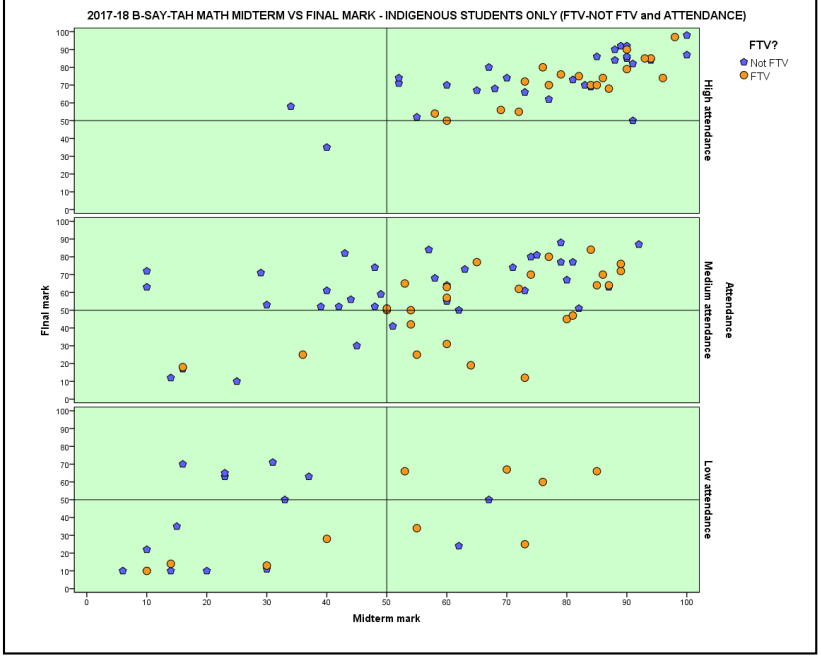
Total # of students=172

- FTV = 87
- Not FTV = 85

Results:

- About ½ of Indigenous social science students were taught by FTV teachers.
- Over half of the FTV cohort were high attenders – few non-FTV students were; all but 4 FTV students received their credit – including almost all who were failing at midterm.
- Most medium attenders were non-FTV students, majority of both groups of students earned their credit.
- A few low attenders received the credit.

Mathematics



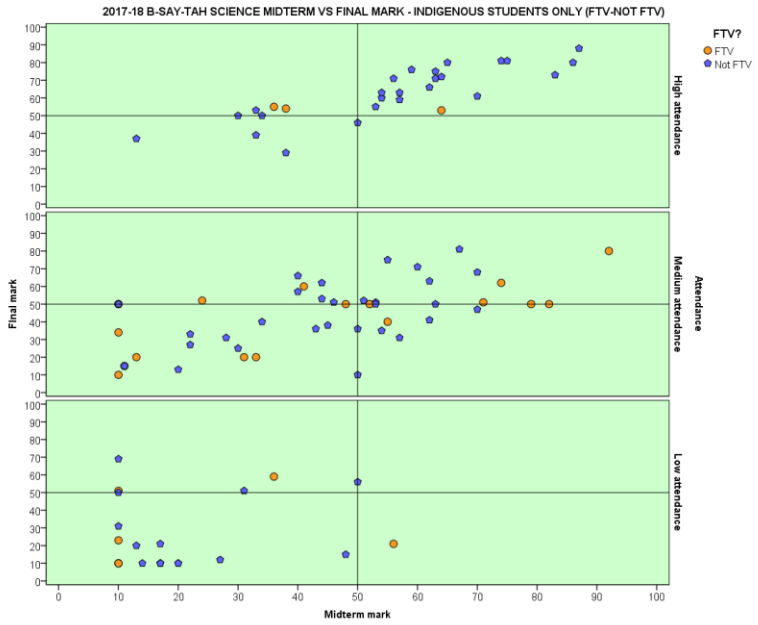
Total # of students=213

- FTV = 104
- Not FTV = 109

Results:

- About one-third of Indigenous math students were taught by FTV teachers.
- About one quarter of both FTV and non-FTV students were high attenders; all but 1 high attender attained their credit.
- All but 4 non-FTV students and about ½ of medium attender FTV students earned their credit.
- Nearly ½ of low attenders – whether FTV or not – earned their credit.

Sciences



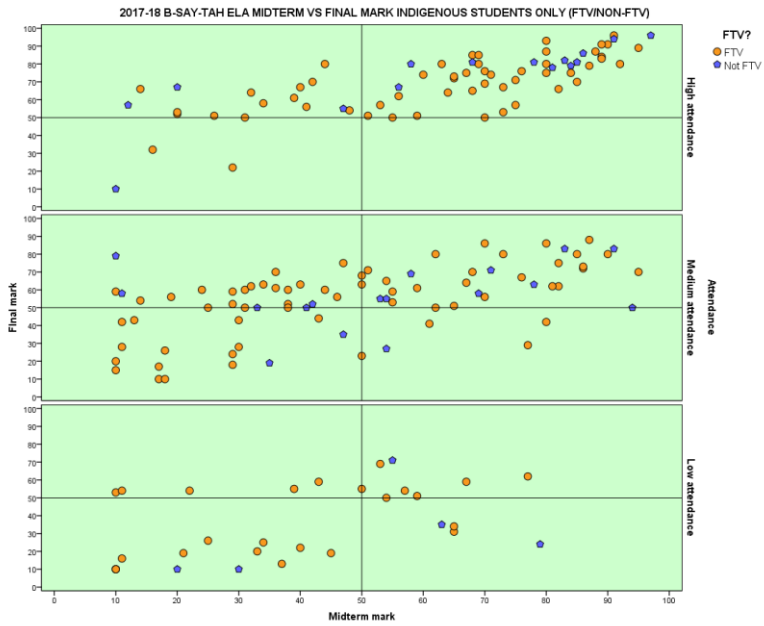
Total # of students=154

- FTV = 27
- Not FTV = 127

Results:

- Only a few Indigenous science students were taught by an FTV teacher.
- Nearly all of the FTV students earned their credit.
- Nearly all high attenders and about one third of medium attenders earned their credit.

English Language Arts



Total # of students=190

- FTV = 151
- Not FTV = 39

Results:

- Nearly all Indigenous ELA students were taught by FTV teachers.
- All but three high attenders earned their credit – including several who were failing at midterm.
- About two-thirds of medium attenders earned their credit – including many who were failing at midterm.
- Several low attenders received their credit – including a few who were failing at midterm.